HEALTH

EDITED BY

DR. ANDREW WILSON, F.R.S.E., &c.

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Notes by the Way

"Health is the foundation of all our physical happiness."—*Herder.*

The question whether linen, cotton, or woollen underclothing is preferable has been recently ventilated in various quarters. Dr. Gustav Jaeger has elaborated a theory of sanitary underclothing, in which he maintains that woollen materials are preferable to all others; and that, by adoption of his idea, the risk of noxious dyes are avoided, and due warmth secured. Dr. Jaeger would also have us dress so that sufficient underclothing would obviate the necessity for great-coats. Now, as regards noxious dyes, these, of course, are rarely, if ever, found in articles of underclothing; and there are comparatively few cases, we are persuaded, in which the ordinary dyes used in colouring other articles of attire can affect health. As regards the contention that we should dispense with great-coats by wearing a sufficiency of warm underclothing, the suggestion is good in theory, but difficult of practical application. If it were merely a question of passing from a normal indoor temperature to that of the outside air, there need be no hesitation in adopting Dr. Jaeger's suggestion. But when we consider that we have to tenant rooms often heated far above a healthy standpoint, and thereafter to face the cold outer temperature, there can be no question that the great-coat or ulster is a necessity of life, and an important means of guarding against cold and chill.

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Mr. Mundella recently stated, in reply to a question asked in Parliament, that the attention of the Privy Council had been called to the case of poisoning by "Holt's Specific for Whooping Cough," to which allusion was recently made in Health. He added that a Bill intended to deal with such cases (and presumably with the entire question of patent and poisonous medicines) was under consideration, and would be introduced in due course in the House of Lords. Recent cases of poisoning by the unguarded use of patent medicines, and through the sale of these medicines by grocers and other unqualified persons, have been somewhat too numerous to escape Government notice.

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An important utterance on the subject of cremation in its relation to health and to the prevention of disease, was recently delivered at Newcastle-on-Tyne by Mr. B. S. Proctor, in the course of an inaugural address delivered before the "Society of Chemical Industry" of that town. Mr. Proctor alluded to the "germ theory" of disease, and to its bearings on the explanation of the spread of infectious diseases. In the course of his remarks he very wisely insisted that neither in life nor in death should an individual permit himself, or be permitted, to become a source of health-danger to his fellows. Remembering Pasteur's important discovery of the conveyance upwards to the surface, by worms, of active disease-germs from the bodies of cattle which had been buried years before, Mr. Proctor insists that in cremation alone can we find our safety from disease-outbreaks. There is much to be said for the view that only the thorough destruction, by fire, of diseased bodies with their contained germs can secure us against the power of these germs to reproduce disease at a future period. All we know of disease forms suggests that burial in the earth does not affect their vitality. The soils of thickly-packed cemeteries must, in many cases, be literally hot-beds of such germs; and it is startling to reflect upon the possibility, that to the renewed activity of such germs resuscitated from the grave, the fresh and apparently mysterious outbreaks of disease which now and then occur may be due.

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Practically we recognise the safety of the actual destruction of disease-germs when we disinfect clothes by steam and by hot air, when we burn the rags used to wipe the mouth of a fever-patient, and when we take care to see that the excretions of cholera and typhoid fever patients are duly destroyed by fire or otherwise. That what is practised in such cases ought to be likewise carried out in the case of the body as a whole, when death from infectious disease exists, is the contention of Mr. Proctor and of other sanitarians. The mere fact that Dr. Cameron, M.P., has given notice that he intends to introduce into Parliament a Bill "To Provide for the Regulation of Cremation and other Modes of Disposal of the Dead" shows that public attention is being directed towards this all-important topic. There is, of course, a strangely sentimental side to this question. The idea of cremation is repulsive, no doubt, to many, as it is the reverse to others. But, as we have before remarked in these pages, the question of the scientific disposal of the dead is one which will be forced upon our notice sooner or later; and in the face of the scientific probability that disease is liable to be propagated from dead to living by the ordinary modes of burial, it would seem as if "cremation" is likely to come to the front, as a solution of a most serious difficulty.

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A curious example of the influence of demand and supply has recently been afforded by an incident mentioned in the Report of the Royal Gardens at Kew for 1881. The natives of India in their abhorrence, as a matter of religious faith, of all animal food, will not eat cheese prepared with ordinary rennet. The cheese-trade of India thus becomes practically non-existent if animal rennet is to be used in the manufacture. A vegetable substitute for the ordinary animal ferment had, therefore, to be found; and the fruit of *Withania coagulans*, a shrub said to be common in Northern India, has been declared suitable as

The "Spécialité" Lime Juice, for family daily use throughout the year, has not the usual musty flavour; will not turn mouldy; may be obtained of Chemists and Grocers.—Feltoe & Sons, Albemarle-street, London, W.—[Advt.]

a ferment for cheese-making. An extract made of the seed-capsules of this plant has been found to clot milk rapidly; and the fermentive principle of the seeds is said to resemble very closely in its characters the ordinary rennet ferment in use amongst ourselves. Henceforth, the Eastern mind may possibly be enabled through this comforting discovery of science to ingest its cheese with a peaceful mind.

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If London has had its "Jumbo," and now possesses its "White Elephant," Scotland can, at least, boast of its whale. The "Tay Whale," we notice, is now being exhibited in various cities and towns of Scotland. As a means of popular instruction, such an exhibition may not be without its good effect; but there are still a large number of persons who may require to be told that a whale is not a fish, but a true mammal (or member of the quadruped class), like man himself. It is astonishing to find many educated persons in this advanced age still believing that a whale is simply "a great first." If scientific opinions be correct, it is probable that the whales have sprung, in the far-back past, from some four-legged beasts allied to the bears. Whales possess two fore-limbs in the shape of swimming-paddles, and two hind-limbs also—the latter, however, being rudimentary, and lying concealed amidst the body tissues. There need be no more surprise that a whale appears before us as a quadruped modified for a water-life, than that a seal (which is merely a kind of dog) should be similarly adapted for an aquatic existence—or, for that matter, than that a bird, adapted for flight, should in certain cases be a runner, like the ostrich; or a swimmer, like the duck or penguin.

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Details of a curious case of fasting have lately been published. A man inmate of a workhouse at Bromsgrove, suffering from a serious nervous disorder, entailing brain-symptoms and complete loss of vision, fasted for thirty-five days. On the sixth day of his fast he took a small piece of toast, but, with this exception, during the whole period took no food or fluid save water. It is stated that he did not exhibit any signs of unusual weakness, but the fact that he spent his days in bed may possibly account for this latter feature. As is usual in such cases of voluntary fasting, religious delusions were present; the patient declaring that he had been commanded from Heaven to eat nothing. This case teaches us anew the great importance (already detailed in our articles on "Fasting" in Health) of water as an essential food-element.

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Next week we begin the publication of a series of articles dealing with the departments included in the programme of the "International Health Exhibition," to be opened at London on May 1, 1884.

Soil-Pipes and their Ventilation.—Recent experiments have demonstrated that, in order to construct a ventilating-pipe from a soil-pipe, drain, or sewer, it is necessary to fit a properly-constructed ventilator or a ventilating cowl to the ventilating-pipe. Only in some such fashion as this can a strong and constant upward current be induced, so that the effete and noxious gases may be drawn out of the pipes, and duly destroyed by contact with the fresh oxygen of the atmosphere—Nature's "own disinfectant." In Messrs. Banner's system such an arrangement is fully carried out.

Original Essays

"Life is not to live, but to be well."—*Martial.*

FIVE TERRIBLE YEARS.

By James Clough.

Five terrible years—1347 to 1351 A.D.—so terrible, indeed, that mankind, struck with doubt and dread—for there were sixty-three million victims—must again and again have inquired if all living beings were to be swept off the face of the earth. These were the five terrible years of the Black Death, called also the Great Death, which in turn swept over the three known quarters of the Old World, from China to Spain, from Greenland to Africa, and, if Greenland, probably also from Labrador to Cape Horn.

The three inseparable sisters, War, Famine, and Pestilence had for many years been stalking among the nations showing their grim, gaunt, cruel forms everywhere, and relenting not on the side of mercy until from one-third to one-half of the population of every known State had perished.

There were signs on the earth in those days in the form of earthquakes, signs in the heavens in the form of comets—those superstitiously dreaded sword-shaped stars; people saw strange visions; there were rumours of wars; there was rampant wickedness in high places; the presages of the destruction of Jerusalem in the old days seemed as nothing to the terrors then present before the eyes of every one.

Indeed, to the pious of the time, whose piety, of course, was plentifully seasoned with bigotry, ignorance, and superstition, the world appeared exceptionally wicked, and at least to demand the fiery sword of the destroying angel to purify it. The great schism of the Papacy tore Christendom asunder, and gave some the occasion to say that the Head of the Church was punishing the Catholic world for its crimes. Others found in the Plague a sign that the God of Abraham was punishing the Christians for allowing the Jews, whom he had accursed, an asylum in their midst; whilst a third party attributed the disasters of the nations to the cessation of Crusades against the Turks. Nor were there wanting those who found in the fiery pestilence the end of all things.

In this century we can afford to look back with philosophic eye at these childish attempts to peer into the inscrutable ways of Providence, and we can—having in mind our own cholera experiences—point to the gross disregard of the most obvious principles of sanitation and other natural causes as sufficient to account for the mischief without laying it at the doors of false Popes, unbelieving Jews, or misbelieving Turks.

From the time of Justinian the Eastern Plague had periodically swept over Europe, for the Crusaders and Christian pilgrims were industrious, though unconscious, disseminators of the pestilence throughout the West, and thus the nations of the East may be said to have been fully avenged of their despoilers.

The Black Death was an Eastern plague, and for the origin of the particular outbreak now under notice we must turn to the Celestial Empire. In that far-off land long and repeated periods of drought and consequent famine were followed by years of superabundant moisture and floods, of superabundant food, and, as a matter of course, of pestilence. In 1334 five millions of Celestials perished of plague, so that, the fields lacking labourers in 1337, a

famine resulted which carried off a further four millions. China has always had important commercial relations with the interior of Asia. Caravans started thence and proceeded through Mongolia and Thibet to the Caspian and the Crimea, to India and to Arabia. From the Euxine there was communication by sea to the city of Constantinople, and in this city the Black Death showed itself in 1347, that is, in ten years after its first appearance in China.

We may now pause, in order to glance at the sanitary condition of Europe at this period, remembering, as we do so, that the Black Death—an epidemic more fatal than Asiatic cholera—had already begun to ravage Constantinople, the commercial and political centre of the three continents, as also the religious capital of the Mahometan world.

In the year 1345 there had been a superabundance of rain throughout Europe, from which great floods arose, and many low-lying districts were reduced to the condition of swamps. The succeeding year was one of great heat, and countless myriads of locusts springing into existence darkened the sun, devoured the harvests, and made the air putrid. This was followed in 1347 by a fearful famine; food was so dear that the poor were obliged to content themselves with all kinds of refuse, sickness prevailed everywhere, children perished of hunger at their mothers' breasts, and in the cities so many died that the living could scarce bury them before corruption set in. And further, the constitutional strength of man, or his power to combat disease, was presumably low at this period, a state of things which had been brought about by the coarse and often unwholesome food which was all that could be obtained because of the constantly-recurring wars, and this condition was further promoted by the bad ventilation of the houses, by the pestilent ditches which surrounded most places under the guise of moats, by the lack of personal cleanliness, and by the filth of domestic arrangements arising from the absence of any attempt at drainage.

The arrival, then, of the plague wave at Constantinople was a most serious event, and fraught with death to countless multitudes. Few diseases indeed which it has been the lot of the historian to record are more calculated to inspire dread than the Black Death. Buboes or inflamed boils about the size of an apple appeared in various parts of the body, especially in the groins and arm-pits. These swellings contained a pestilential matter of a most disgusting odour, and in the root was a hard, black, coal-like nucleus about the size of a lentil. If the patient were safely relieved of this matter all might be well with him, or at least there was some chance of so desirable a consummation; but if not, then black spots appeared all over the body, the lungs rotted away, black blood was thrown up, and the breath was so pestilential, and even infectious, that few were found sufficiently courageous to nurse the patient. The nearest and dearest relationship, as a rule, ceased to be a bond of union, and even mothers fled from their helpless babes. The forsaken patient was torn to pieces by burning pains in the chest, by scorching thirst which no known liquid could quench, and he had moreover the consciousness that if any one should be so far softened by the calls of humanity as to come to his relief, his very touch, even his very breath, contained the seeds of the disease, and might slay the Good Samaritan within a few hours.

By preference the disease attacked the young, and it added to its terrors by its rapidity of action. Three days mostly sufficed to give the victim his quietus, and though some lasted till the fifth day, they must have envied those who died early—even those who died, as some did, as suddenly as if by the hand of the assassin—for the sufferings of those who were attacked were so intense that they howled like dogs. It can scarce be wondered that some sought relief by suicide.

Nor was the disease confined to man alone, for all animals with which he came in contact perished too. Horses, oxen, sheep, dogs, swine, and even poultry are mentioned as having been especially liable to attack; and one writer adds that the most ravenous beasts of prey would not touch any of the carrion thus gratuitously provided, because of its exceptionally offensive odour.

Such, then, was the frightful epidemic which, as we have said, appeared at Constantinople in 1347, and that just when the concatenation of circumstances seemed most favourable for its propagation.

(To be continued.)

STORIES OF SCIENCE AND CRIME.

SIXTH PAPER.—CASES OF FASTING. *(Continued).*

Among the many celebrated cases of fasting, that of Reuben Kelsey figures as one of the most notable. An account of it has been given by Dr. B. W. Richardson:—

The faster in this case lived for fifty-three days, and his history, tersely told by the narrator who observed it, runs as follows:—The individual who subjected himself to the fast was a youth named Reuben Kelsey. Until three years before he commenced his fatal fast he was considered a young man of great promise, remarkable for the correctness of his conduct and for his diligence in the prosecution of his studies. After having received the ordinary advantages at the Academy at Fairfield, he entered on the study of medicine, and read in the office of Dr. Johnson. In the year 1825 he attended the lectures at the College of Physicians and Surgeons of the Western District.

Although, among so many, it is not always possible to know what proficiency each makes, yet, from all that could be gathered, he must have at least equalled his companions in the progress he made in his studies. His health seemed good, and there was nothing very peculiar in the operations of his mind. But in the course of the summer, after the close of the session of the college, his health began to decline, and his mind seemed to have undergone a change. His spirits, which were never very buoyant, became more sedate, and his thoughts seemed habitually to dwell on the subject of religion. He quitted Dr. Johnson's office and went home. From that time until his death he never left his father's house, even for a day. For the three years immediately preceding his death he almost constantly kept his room, apparently engaged in meditation. His only companion was his Bible. He read nothing else, and his whole thoughts seemed fixed upon another world. He shunned society, even that of the pious; but he seemed happy and full of hope. To his family he was kind and attached, and,

Medical and Sanitary Exhibition, 1881.—Award of Merit.—Diabetes. Van Abbott's Gluten Bread, and all other suitable Foods for Diabetic Patients. Dietary Tables and Price Lists post-free on application. Van Abbott, 5, Princes-street, Cavendish-square, W.—Delicate Children and Adults Suffering from Nervous Depression. Van Abbott's Hypophosphite of Lime Biscuits, for Delicate Children, especially those suffering from Deficiency of Bone, Weak Joints, or Debility, and Adults suffering from Nervous Depression. Each Biscuit contains five grains of the Hypophosphite of Lime. "Quite free from disagreeable taste, and taken willingly by Children, and certainly provide an excellent means of administering this valuable compound. Our analysis proves the accuracy of the printed descriptions on the labels of the boxes. The Biscuits were suggested by Mr. W. Adams, of the Orthopædic and Great Northern Hospitals." — *Lancet*, Nov. 4, 1876.—Van Abbott, 5, Princes-street, Cavendish-square.—[Advt.]

with the exception of the deep cast of his devotional feelings, the equilibrium of his intellect did not seem, to his friends at least, to be materially disturbed.

Considering the little exercise he took, his general health during the period was as good as could have been expected He came to the table at every meal when called, and seemed not deficient in appetite. The only sickness of any consequence he experienced during his seclusion was an attack of cholera morbus in the summer of 1828, from which he soon recovered, and seemed to enjoy his wonted health until the latter end of May, 1829. At this time his friends began to notice that his appetite was failing. It continued to decline more and more until about the beginning of July, when it seemed entirely to have disappeared. For some weeks he had eaten very little, but on the 2nd of July he declined eating altogether, assigning as a reason that when it was the will of the Almighty that he should eat he would be furnished with an appetite. For the first six weeks he went regularly to the well in the morning and washed his head and face, and took a bowlful of water with him into the house. With this he used occasionally to wash his mouth; he also used it for drink. His parents think that the quantity of water he took in twenty-four hours did not exceed, if it equalled, a pint. When he had fasted about a week his parents became alarmed, and sent for medical aid.

Compulsory means to make him take food were found unavailing. On one occasion he went three days without taking even water; but this was probably more than he could persist in, as on the fourth morning he was observed to go to the well and to drink copiously and greedily.

On the eleventh day of the fast, he replied to the expostulations of his friends that he had not felt so well nor so strong in two years as at that moment, and consequently denied the necessity of taking food. For the first six weeks he walked out every day, and sometimes spent a great part of the day in the woods. His walk was steady and firm, and his friends even remarked that his step had an unusual elasticity. He shaved himself until about a week before his death, and was able to sit up in bed to the last day.

His mental faculties did not seem to become impaired as his general strength declined, but, on the contrary, his mind was calm and collected to the end. His voice, as might have been expected, towards the last became feeble and low, but continued, nevertheless, distinct. Towards the close of his life he did not go into the fields, nor during the last week even to the well, but still he was able to sit up and go about his room. During the first three weeks of his abstinence he fell away very fast, but afterwards he did not seem to waste so sensibly. His colour was blue, and, towards the last, blackish. His skin was cold, and he complained of chilliness. His general appearance was so ghastly that children were frightened at the sight of him. Of this he seemed himself to be aware, for it was not uncommon to observe him covering his face when strangers were passing by. He died on the fifty-third day. At the time of his death Mr. Kelsey was twenty-seven years of age.

Dr. M'Naughton very reasonably supposed that the system in this case, as in the cases of hybernating animals, lived on its own resources. When the body is emaciated, the fatty part is taken up by the absorbents and conveyed into the blood,—the chief condition for which state of things to be carried on without causing delirium, raging fever, and death, is a supply of water to dissolve and dilute the saline and alkaline fluids. No other drink would answer the same intention in cases of abstinence from all solid food; strong drinks would consume the vital powers, inflame the digestive canal, and prevent absorption taking place. The nutritives, so-called, as porter, beer, and the like, would oppress the brain and cause fever and stupefaction and dropsy.

Sanitary Inspections.—Fee for Survey and Report, in London, 2 Guineas. Estimate given and Improvement Works carried out when required.—The Sanitary Engineering Co., 115, Victoria-street, Westminster, S.W.—[Advt.]

More about Kola Nut.—Messrs. Heyman & Phillips, of 15, Clifford-street, Bond-street, W., are grateful to the Editor of Health for his interesting article in the issue of January 11th. The Kola Nut on sale, 2s. 9d. a box, from them or from all chemists. —[Advt.]

INTERNATIONAL HEALTH EXHIBITION,

LONDON, 1884.

The following details will prove of interest to our readers:—

Patents, Designs, and Trade Marks Act, 1883.—The following certificate has been received from the Board of Trade:—"Upon the application of Mr. Edward Cunliffe-Owen, of South Kensington, made to the Board of Trade, on Nov. 30, 1883, the Board of Trade do hereby certify that the International Health Exhibition proposed to be held at South Kensington, in the county of Middlesex, from May 1, 1884, is an International Exhibition.—Signed by order of the Board of Trade this ninth day of January, 1884.—Henry G. Calcraft, Assistant-Secretary, Board of Trade."

The attention of exhibitors is specially drawn to the following extract from the Patents, Designs, and Trade Marks Act, 1883:—

"39. The exhibition of an invention at an industrial or international exhibition, certified as such by the Board of Trade, or the publication of any description of the invention during the period of the holding of the exhibition, or the use of the invention for the purpose of the exhibition, in the place where the exhibition is held, or the use of the invention during the period of the holding of the exhibition by any person elsewhere, without the privity or consent of the inventor, shall not prejudice the right of the inventor or his legal personal representative to apply for and obtain provisional protection, and a patent in respect of the invention, or the validity of any patent granted on the application, provided that both the following conditions are complied with, namely—(*a*) The exhibitor must, before exhibiting the invention, give the Comptroller the prescribed notice of his intention to do so; and (*b*) the application for a patent must be made before or within six months from the date of the opening of the exhibition.

"57. The exhibition at an industrial or international exhibition, certified as such by the Board of Trade, or the exhibition elsewhere during the period of the holding of the exhibition, without the privity or consent of the proprietor, of a design or of any article to which a design is applied, or the publication, during the holding of any such exhibition, of a description of a design, shall not prevent the design from being registered, or invalidate the registration thereof, provided that both the following conditions are complied with, namely,—(*a*) The exhibitor must, before exhibiting the design or article, or publishing a description of the design, give the Comptroller the prescribed notice of his intention to do so; and (*b*) the application for registration must be made before or within six months from the date of the opening of the exhibition.

Personal Health

"Be timely wise;
With health all taste of pleasure flies."—*Gay.*

BEAUTY-CULTURE.

By Philip Foster, M.D.

THIRD PART.

"Beauty itself doth of itself persuade
The eyes of men without an orator."—*Shakespere.*

The style in which the hair is arranged should be decided by the face, and not dictated by fashion. Large pads and masses of false hair are objectionable, as they give an appearance of heaviness to the head, and overheat it. There are few persons who are not improved by a light curl or two on the brow, but any mode of dressing the hair, as the Grecian fringe, by which the forehead is covered, gives an unintelligent look, and consequently detracts from what has just been insisted upon as one of the principal elements in beauty. Vigorous friction for a few minutes daily with a brush moderately hard, but not sufficiently so to be unpleasant, is the best means of increasing the blood supply, and consequently of promoting the nourishment, luxuriance, softness, and glossiness of the hair. The only objection to a little simple grease is that it soils the headdress. For washing the head, warm, not hot, water should be used, and the soap be free from excess of alkali. We may rest assured that the natural colour of the hair, whatever it may be, is the colour that suits us best; and could we change it, as the advertisements promise, to the "fashionable" hue, we should lose, not gain, by the alteration. Cantharides (Spanish fly) is the active ingredient of all hair-producers, and as good a wash for incipient baldness as can be used is made by diluting the tincture with twice its bulk of water.

The whiteness and softness of the hands may be preserved by wearing gloves during exposure to great heat, whether from the sun or fire, and when doing any rough work. Dryness of the skin indicates derangement of health, and calls for medical treatment rather than local applications. Every time the hands are washed the skin at the nail-roots should be pushed gently back, and the under surface of the nails cleaned with a *soft* brush. Smoothness may be restored after washing by rubbing the back of each hand lightly for a minute or so with the palm of the other. Curved nail-scissors, which can be obtained at the surgical instrument-makers, are much more convenient than the old-fashioned straight ones.

The human form divine cannot be improved by the modiste, and the more closely dress follows the natural outline of the body, the more becoming it will be. Where the figure is defective a little padding may—should, I think, be used; but all contrivances for producing unnatural fulness are thoroughly inartistic, and their adoption indicates slavish adherence to fashion or vitiated taste. Compression of the waist, which has just been condemned on account of its injuriousness to health, must here be denounced on the ground of taste. The beauty of the waist consists in the gentleness and gradualness of the inward curve, and is destroyed by tight-lacing. High-heeled and tight boots render progression difficult, and consequently ungraceful. Perpendicular stripes increase both apparent height and fulness; while horizontal ones give breadth, but decrease height. All lines across the figure make persons look shorter, and anything which increases the real or apparent breadth has the same effect. Glossy materials, like dark colours, have the property of reducing apparent bulk. Little women, then, and those inclined to be stout, should avoid flounces and double skirts, and have their dresses cut in that most elegant and becoming, because most natural, of all styles—the "Princess," the long, flowing, uninterrupted lines of which would make them appear taller and slighter. "Draping well" is a quality that must never be lost sight of in the selection of a dress-piece. The complexion, hair, and eyes should, of course, regulate the colours worn. As a guide in this matter, the fair reader would do well to make herself acquainted with the composition of colours, as any component of a colour will harmonise with it. The use of different shades of the same colour is an easy way out of this difficulty, and the effect produced always chaste and excellent. The gloves require to be lighter than the dress, and not anything is comparable to lace for the neck and wrists. Not only must dress be tasteful in itself, but it must also accord with the station in life and immediate occupation of the wearer, otherwise an unpleasant impression of incongruity will be created.

Our houses are, so to speak, the back-ground of the picture, and their appropriate decoration is a matter of no little importance, although its discussion does not lie within the province of this article.

One of the rarest and most powerful weapons in the armamentarium of beauty is a perfectly easy, natural, and unaffected manner. Let the fair reader, then, beware of affectation and conceit, which will mar all else, and inevitably excite contempt, ridicule, and dislike. Nervous movements, mannerisms, and tricks of habits, from which few are entirely free, are often performed quite unconsciously, and therefore, in order that they may be corrected, some relative or intimate friend should be requested to point them out.

Dr. George M. Beard and Mr. Herbert Spencer almost simultaneously sound the alarm against our modern worry in the words, "The gospel of work must make way for the gospel of rest." An English writer, signing himself E. S., protests, in the *Journal of Science*, against a theory of civilisation which makes the acquisition of material wealth almost its sole object, and which brands all men not engaged in such pursuit as idlers. "We have under its inspiration stripped our own country, over a great and increasing part of its surface, of every beautiful feature. We have blackened its skies with smoke-clouds, polluted its air with sulphurous acid, filled its streams with liquid filth, covered its hills with 'spoil-banks,' blighted its green fields, cut down its woods, and extirpated many of its most lovely animal and vegetable species. Our cities, from London downwards, present, as their main feature, meanness, monotony, and ugliness by the square mile; rarely, indeed, relieved by a street or a single building upon which the eye may rest without pain." The diseases caused by over-work, public morals, and the effect of our system on true intellectual progress, receive vigorous treatment. The author concludes that our industrial civilisation is found wanting in every particular. "It has broken down more rapidly and more disastrously, even, than the military *régime* which preceded it, and will be found to have left upon the human race even deeper marks of its failure."

Kitchens Made Light by Means of Chappuis' Daylight Reflectors.—The cost is from 25s.; the saving in gas or oil soon makes up for that outlay. Prospectuses sent on receipt of two stamps, addressed (H.) Chappuis, patentee, 69, Fleet-street, London. —[Advt.]

Our Papers on Popular Science.

THIRD PAPER.

"Blessings on Science! When the Earth seemed old,
When Faith grew doting, and our reason cold,
'Twas she discovered that the world was young,
And taught a language to its lisping tongue."
—*Charles Mackay.*

AIR.—I.

By Edward H. Riches, LL.D., F.R.A.S.

The air which surrounds or envelopes our globe is a mixture (not a chemical compound) of oxygen and nitrogen, with a minute proportion of carbonic acid and water in the state of vapour; and these last, the carbonic acid and the water, although constituent parts of the air, are, as it were, accidental ingredients. Now this atmospheric air, upon which every form of life, including, of course, our own, so largely depends, is, as was just observed, a *mixture*—a transparent fluid—for the ultimate particles composing it are not subject to cohesion, hence we can readily understand how it is that this air has a tendency to spread out in all directions, to rise upwards and to sink downwards. We may remember also that air is *porous* to a very great extent, for we know that a great bulk of air may be compressed into a very small space, but as it cannot be compressed beyond a certain limit we may bear in mind that it is also impenetrable. Now just as a cork, if placed at the bottom of a vessel filled with water will, when released, at once rise to the surface, so steam, for the reason that it is about half the weight of atmospheric air, will always rise and float in it. If air be estimated by weight it is found approximately to consist of one atom, or equivalent, of oxygen to two of nitrogen; or if it be estimated by volume, the oxygen is to the nitrogen in the ratio of one to four. It may be noted, too, that when air is understood to be a *mixture* rather than a *combination* of gases, it is not to be supposed that the distinctive properties of the components are changed, and that they do not retain these, although in other chemical bodies, such as nitrous and nitric oxides and nitrous and nitric acids formed from a compound of oxygen and nitrogen, the properties of both the gases are almost lost, and new properties created.

In all climates and at all altitudes the ratio of the oxygen to the nitrogen in the atmospheric air remains nearly the same. In ancient times little was understood as to the weight which air possesses, but that it does contain weight may be easily ascertained from such a simple experiment as weighing in a finely-adjusted scale a vessel containing air with a vessel of equal weight from which the air has been exhausted. And as the air has weight, it must also exercise a pressure upon everything; and to show the very great pressure which it does bear may be proved if we take, say, two hollow hemispheres, and place one loosely on the top of the other; now let a tube with a stop-cock be connected with the exhausting apparatus of an air-pump. As long as the stop-cock is open, the top hemisphere may be easily lifted from the lower one, for the reason that, putting aside the weight of the hemisphere itself, the pressure of air within it counterbalances the pressure of air without. Now, let the air be withdrawn from the interior, the stop-cock closed, and the apparatus unscrewed from the air-pump (taking great care that no air enters); it will require a very considerable force to separate the two hemispheres. Some idea of the force required may be gathered by, say, supposing the diameter of the circle of the hemisphere to be fourteen inches, when it would require a force equivalent to nearly a ton. If it were not for the counterbalancing of this pressure of the air from within the human body, as opposed to the pressure from without, our physical frame would be crushed into fragments! It is not our present intention, however, to enlarge on the varieties of detail connected with the chemical and mechanical properties of air, but as concerning most branches of science there is a knowledge—a right understanding of which is useful in every-day life—and as it so frequently happens that an acquaintance with scientific facts is highly conducive to appreciating aright their correct application to hygienic matters, it will be our aim in the course of this series of "Popular Science Papers" to gather up just those crumbs which shall, in their cohesion, form a wholesome and easily-digested mental food; for as Thomson said,

Oh! who, who would live, if only just to breathe
This idle air, and indolently run,
Day after day, the still returning round
Of Life's mean offices, and sickly joys?

We often speak of *drawing in the breath*, and we do so in order that we may have an enlarged space in our chest, when the pressure of the air which is external to us is forced in to fill up the vacancy, the air entering the lungs not, as will be seen, because it is *drawn in*, but because the weight of the atmosphere forces it into the empty space. The air is caused to escape from the lungs by means of its elasticity; in fact, by means of muscular action, the lungs compress the air contained in them, and, by this compression, give to it a greater elasticity than the air outside; and, by the excess of this elasticity, it is propelled, and escapes through the nose and mouth.

It may be remembered that water, and most liquids exposed to the air, absorb a certain amount of air, and this is maintained in them by the pressure of the atmosphere acting on the surface of the liquid; and in the case of boiling water it may be remembered that there is no taste in it, for the reason that the heat has expelled the air which was contained in it before boiling. It is a fact, too, that the temperature at which water boils is dependent on this pressure of the air which we have alluded to; for instance, it has been found impossible to boil an egg at the top of a very high mountain, but in places *where the pressure is very slight* the water boils and goes off in steam without becoming even hot enough to boil an egg.

The subject of warming and ventilation will be treated in our next paper, from which it will be seen the reasons why vitiated air is so fatal to life. Accident and disease in the case of human beings often furnish us with experiments, some of which have been cruelly tried on animals. We frequently hear people complain of the vitiated air in a room or building, but they say sometimes: "Never mind, I shall soon get accustomed to it;" and some ignorantly suppose that, because they really do get so accustomed to it that it can be borne without any considerable degree of discomfort—that it is doing them no harm. But this is a dangerous error indeed to fall into. At what a price,

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too, do people get accustomed to bad air! (And, for the matter of that, to many other bad things in life!) There always ensues a gradual depression of all the functions of nutrition and secretion; less oxygen, under these circumstances, is absorbed, so less *is required* in the atmosphere.

Just as a vitiated atmosphere will suffice for the respiration of a cold-blooded animal, it will be enough for a *depressed* organism. Have we not noticed that when we enter a vitiated atmosphere our breathing becomes very laborious, and in consequence a depression of all the organic functions ensues; but, when this depression has actually come about, we find that we can breathe again more easily. Why is this? Simply because we do not under this new condition require so much oxygen, and also we do not give out so much carbonic acid. It would not, indeed, be possible to live at all in a vitiated atmosphere were it not for this readjustment, so to speak, of the organism. But because we may get accused to bad air, let us ever remember that to breathe it is most harmful; and the law of adaptation is here beautifully seen in the fact that our organisms, under certain conditions, are depressed just to the necessary point of our being capable of respiring when in a vitiated atmosphere.

What is understood by real ventilation should be, then, a getting rid of all vitiated air and a replacing it by fresh air; and for some matters in relation to this the reader is referred to our next paper.

"THE SONG OF THE SPORES."

A SCIENTIFIC DITTY.

The following ode details in humorous fashion the principles of the germ theory, and of the system of surgery—"antiseptic surgery"—with which the name of Sir Joseph Lister is so worthily associated. By means of carbolic-acid spray and dressings, the antiseptic system obviates many dangers in surgery; the system being founded on the theory that carbolic acid destroys the germs or spores of lower life which the air contains, and which produce putrefaction and suppuration in wounds:—

When you open your mouth or breath through your nose,
I am sure you are all aware, oh!
You take in as many live things at a dose
As bothered the life out of Pharaoh.
For they float on the tide of the air, air, air;
They float on the tide of the air.

They dart in and out, and they rush out and in
With a freedom that makes people stare, oh!
And if any one thinks of incising the skin,
The vermin are sure to be there, oh!
For they float, &c.

They assume many forms as they change their abode,
Some are stout ones, but others are spare, oh!
They are round like a cell, or resemble a rod,
As they wriggle about in the air, oh!
For they float, &c.

Some say they are starch, and some say they are soot,
And they think it's a paltry affair, oh!
To smother such stuff in "carbolic dilute,"
With the greatest precision and care, oh!
While they float, &c.

But others believe that such pests are the cause
Of diseases neither little or rare, oh!
So they kill them with lac, and with spray and with gauze,
As proclained from the Clinical Chair, oh!
While they float, &c.

So sing to the praise of the wonderful Joe,
Who controls all the powers of the air, oh!
Laying sporules and germs and epiphytes low,
As they dance on the stump that is bare, oh!
For they float, &c.

May the sporicide rise, and with each passing day
Drench the vermin before they're aware, oh!
With the clear sparkling foam of the murderous spray,
As they circle about in the air, oh!
For they float, &c.

And may swift wing'd Time hasten onward in flight,
Till it joyfully comes to declare, oh!
That the spore-killer ranks as a baronet or knight,
For exploits in the Clinical Chair, oh!
For he kills every germ in the air, air, air;
He kills every germ in the air.

There is nothing that so tends to shorten the lives of old people, and to injure their health, as the practice of sitting up late, particularly winter evenings. This is especially the case when there is a grown up daughter in the family. This sanitary item is published at the request of several young men.

Alphonse Karr was lately a guest at a dinner of some homœopathic physicians at Paris, when, after toasts had been honoured to Hahnemann and to the great lights of the science now living, he was asked to propose a toast. "Gentlemen," he said, "you have drunk the health of many physicians, but there is one toast you have forgotten. Permit me to repair this omission. I drink to the health of your patients."

James T. Fields used to tell this story of Dr. Channing (*Med. and Surg. Rep.*):—"The reverend doctor and the medical doctor were both at a party in Boston one evening, and, some one being taken ill, the man of medicines, Dr. Walter Channing, was summoned. The servant entered the room where the brothers were seated, and said, 'Dr. Channing is wanted.' 'Which Dr. Channing?' said Walter, the physician; 'the one who preaches, or the one who practises?'"

Change of Air for Children.—The robust aspect of healthy children is good evidence of the thorough hygienic state of the dwelling-house, and of the excellence of its domestic management. A ruddy glow in the face of a child tells at once of sufficient outdoor exercise and indoor ventilation. Without a full amount of fresh and pure air the cheek loses its colour and the flesh its firmness. The blood is impoverished, its circulation languid, and nutrition is interrupted. The effect of what is called "change of air" in stimulating these processes is well known, and particularly obvious in children. Very often the good that would be done in this way is put in jeopardy by too much attention being directed to the particular place where this change is to be obtained, and too little to the sanitary state of the house and the size of the rooms to be occupied. Perhaps the smaller bedrooms are allotted to the children, unmindful of the fact that they spend nearly half of the twenty-four hours continuously in the bedroom; or they have but one room for meals and for play, so that if kept indoors by a wet day they have to pass many hours together in one room. It may be that neglect of some of these particulars at home has occasioned the necessity for the change; if they always received the attention deserved, both at home and abroad, periodic visits to so-called "health resorts" would be required less frequently, and we might find a more uniformly healthy appearance among the children of the residents.

The Family Circle

"The child is father of the man."—*Wordsworth.*
"In bringing up a child, think of its old age."—*Joubert.*

A FEW RULES FOR DYSPEPTICS.

1. Eat slowly, masticating the food very thoroughly, even more so, if possible, than is required in health. The more time the food spends in the mouth, the less it will spend in the stomach.

2. Avoid drinking at meals; at most, take a few sips of warm drink at the close of the meal, if the food is very dry in character.

3. In general, dyspeptic stomachs manage dry food better than that containing much fluid.

4. Eat neither very hot nor cold food. The best temperature is about that of the body. Avoid exposure to cold after eating.

5. Be careful to avoid excess in eating. Eat no more than the wants of the system require. Sometimes less than is really needed must be taken when digestion is very weak. Strength depends not on what is eaten, but on what is digested.

6. Never take violent exercise of any sort, either mental or physical, either just before or just after a meal. It is not good to sleep immediately after eating, nor within four hours of a meal.

7. Never eat more than three times a day, and make the last meal very light. For many dyspeptics, two meals are better than more.

8. Never eat a morsel of any sort between meals.

9. Never eat when very tired, whether exhausted from mental or physical labour.

10. Never eat when the mind is worried or the temper ruffled, if possible to avoid doing so.

11. Eat only food that is easy of digestion, avoiding complicated and indigestible dishes, and taking but one to three kinds at a meal.

12. Most persons will be benefited by the use of oatmeal, wheat meal, or Graham flour, cracked wheat, and other whole-grain preparations, though many will find it necessary to avoid vegetables, especially when fruits are taken.

OUR USEFUL NOTE-BOOK.

"When found, make a note of."—*Captain Cuttle.*

To Make Plaster-Casts.—To take a plaster-cast of the face of a living person, proceed as follows:—Let the person lie down on his back, an oil-cloth or other material being placed under the head to protect the bed or lounge. Anoint the face, which ought to be as smooth as possible, with almond or any other bland oil, and cover any hairy portions, such as eye-brows, moustache, or beard, with hot flour paste, which should be allowed to become somewhat dry, though it is not necessary to wait long. The object is to preserve the contour or outline of the hair-tours, while, at the same time, preventing the plaster from getting into the hairs. Flexible collodion may also be used, either on the hairy portions alone or all over the face. A thick cloth is passed around the head, closely fitting to the latter, the object of which is to limit the extent of the cast, that is, to prevent the still moist plaster from flowing round to the back of the head. Everything being ready, two metallic or pasteboard tubes are inserted in the nostrils, to permit the person to breathe, and the previously prepared paste, made of the best dentists' plaster is immediately poured on. It should set rapidly, and may be removed without trouble. From this form, properly oiled, and, if necessary, trimmed and improved by hand, casts of the face may be made by oiling and filling with plaster-paste. The same method is followed in taking plaster-casts of other parts of the body, or of the whole body itself. In the latter case, it is necessary to subdivide the surface into such a number of parts that they may easily be handled. The pieces are taken one after another, so that the contiguous pieces which had been cast previously are applied to the body. In this way the boundary of the next pieces is exactly defined. It is also advisable to imbed stout strings lengthwise into each cast, so as to be able to lift it without getting hold of the edges. When putting it together for the purpose of making a cast of the whole body, the strings must be so situated and of such a length, that the parts can be well bound together. This is to be borne in mind while laying out the plan for making the cast.

Cold Cream.—Mr. Ad. Vomacka gives the following formula and directions for cold cream, in the *Seifenfabrikant*:—White wax, 200; spermaceti, 500; oil of almonds, expressed, 1,600; rose-water, 80 parts; oil of rose, for each 2.4 kilos., 30 drops. Melt the wax and spermaceti at a gentle heat on the water-bath, pour the mass into a very shallow, warmed porcelain dish, and let it stand over-night covered with paper. Next morning, begin to work the hardened mass by a gentle, uniform to-and-fro motion of the pestle, which should be held lightly between the fingers without exerting pressure, commencing at the edge, gradually working towards the middle, and mixing the whole thoroughly. The prescribed amount of rose-water is now slowly added, in a thin stream, and while constantly stirring. If desired, 5 grms. of borax may be dissolved in the rose-water, which will facilitate the combination. The mortar is now well covered and set aside for one or two days, in order to give the fat a chance to combine with the water. It is then again briskly stirred for a quarter or half an hour, and, finally, the oil of rose is added, previously dissolved in a little castor oil, which latter imparts to the cold cream an extremely handsome dull lustre. . . . . The readiness with which cold cream becomes rancid or acid makes it advisable to add to it some suitable preservative, if it is to be kept for any length of time. A very good method is to add a small quantity of salicylic acid dissolved in rose-water or sweet spirit of nitre. In place of oil of rose, other oils or mixtures of oils may be used, as for instance:—1. Oil of neroli, 10 parts; oil of rose, 5 parts; oil of lemon, 15 parts. 2. Oil of bergamot, 9 grms.; oil of lavender (finest), 3 grms.; oil of rose, 35 drops. 3. Oil of lemon, 5 parts; oil of lavender (finest), 5 parts; musk, 0·4 parts.

Vaseline Cold Cream.—This is prepared in the same manner as the above, and the ingredients are as follows:—Spermaceti, 150 parts; paraffin, 150 parts; Vaseline, white, 1,000 parts; rose-water, 600 parts; oil of rose, to every 2·4 kilos, 30 drops.

HOW TO GET THIN.

An old writer tells us that the most tragic spectacle on earth is to see a virtuous man fighting against an adverse fate. The case of William Banting may stand side by side with such, says a writer in the *Neue Freie Presse*, for he, unhappy mortal, had for above thirty years to fight without result against an over-freight of 50 lb. of fat. Trivial as this may appear to thin people, it is often a question of life and death to those victims of corpulence who, being possessed of a sensitive mind and cheerful constitution, have to go through life bearing all the moral humiliations and other more material discomforts to which people of an

excessive *embonpoint* are subjected by their unfeeling fellow creatures. Mr. Banting could not find the strength to regard with Olympian indifference the sneers and smiles which his unfortunate person attracted. He retired into solitude, and there for a long time made vain endeavours to rid himself of his disease. For years this seemed impossible; he grew weaker and weaker by following the prescriptions of the physicians, which all tended to the one point, that to become less corpulent a rigid diet must be kept. But suddenly a new method was invented by the hard-pressed man; he tried it, and who could describe the delight of the sufferer, when slowly but steadily his stoutness, and with it all the other symptoms of disease, began to disappear. Every one is acquainted with the principles of the "Banting system," which the happy inventor described for the good of his fellow men, in a publication where we often meet with bursts of enthusiasm, such as almost convert the book into a hymn of praise. In the German translation some hitherto unmentioned prescriptions have been added: one of them, more curious than wise, but entirely harmless, is "to allow the mental powers to become more active"—a piece of advice which perhaps it would be difficult to follow by those who have not to compose a "Divina Commedia," which, as Dante himself tells us, kept him thin.

A new book on "Corpulence, and its Treatment," has lately been published in Germany by Professor Ebstein, of Göttingen. He is not, like the English "saviour of the stout," full of overflowing thankfulness for relief from his disease; probably he has not even suffered from it, for corpulent men are rarely stern and strict. His method also differs from that of Banting. According to Ebstein the primary cause of corpulency is the want of sufficient energy to renounce the so-called attractions of life. He firmly maintains that fat is produced merely by over-eating and drinking. Water and drinking cures are altogether condemned by Professor Ebstein; and while the Banting system teaches that "fat makes fat," this doctrine is directly opposed by Professor Ebstein, in whose ideal of fare for those suffering from corpulency fat forms a great feature. "The 250 grammes of bacon," says Professor Ebstein, "which our Emperor ordered to be delivered daily to all soldiers taking part in the French campaign of 1870, are, so to speak, an official acknowledgment of the importance of fat in the rational nourishment of a hard-working man." The annexed bill of fare is that proposed by Professor Ebstein for an average case of corpulency, the invalid being supposed to be forty-one years of age, and having suffered from increasing stoutness for twenty-five years. The disease is supposed to be contracted by insufficient bodily exercise, a diet consisting of such things as are hurtful, among which are named all sweet dishes and those containing much albumen, and those devoid of a sufficient quantity of fat.

Breakfast.—A large cup of black tea without milk or sugar; 50 grammes of white bread, or toasted brown bread with plenty of butter.

Dinner.—Soup (frequently and with bone-marrow), 120-180 grammes meat, boiled or roasted, with fat gravy—fat meat being preferable; a small quantity of vegetables, particularly leguminous, but also all kinds of cabbage. Turnips are excluded, because of the sugar contained in them; potatoes are altogether excluded. After dinner some fresh fruit when in season, as dessert; a salad of baked fruit without sugar. Two or three glasses of a light wine. Soon after dinner a large cup of black tea, without milk and sugar.

Supper.—In winter regularly, in summer occasionally, a large cup of black tea without milk and sugar. An egg or some fat roast meat, or both, sometimes fat ham, smoked or fresh fish, about thirty grammes of white bread, with plenty of butter, and occasionally a small quantity of cheese and some fresh fruit.

Recreation and Health

"Health is the vital principle of bliss,
And Exercise of health."—*Thomson.*

CALISTHENICS, OR LESSONS IN PHYSICAL EDUCATION.

By H. C. Standage.

(SECOND PAPER).

"Let us now begin our first lesson."

"Delighted, I'm sure!"

"Yes; we are most anxious to test your powers as an instructor!"

"Well, girls, are you ready?"

"Yes, quite."

"Now, form up in line; the first exercise will be one that will enable you to turn round easily, and without such awkwardness as Miss Ethel does at times—that is, I am going to put you through your 'turnings.' Stand in this position—heels close together, toes turned out on an angle of forty-five degrees to the front, arms hanging loosely by your sides, head erect, eyes looking straight to the front, chest thrown forward, and shoulders put in an unrestrained position. Now, on the word 'Attention,' straighten the knees and stand still. Now, girls, don't laugh; there is such a word in the dictionary, and must be used. In the command, 'prepare for exercise,' raise the left arm, bending it at the elbow, letting the hand rest on the hip, and each one but the pupil on the extreme right take a side pace to the left. You will thus be clear of each other, and will not jostle one another in turning. On the word 'Two,' drop the left arm and come to 'attention.' Now, girls, there are three positions I want you to learn: First, to turn round to the right; second, to the left; and third, to turn the body completely round, so that you face the opposite direction to the present. In making these turnings, you must not budge an inch from the ground on which you stand; and in the act of turning you keep the heels firmly on the ground, the whole weight of the body resting on them, all the movements being done by raising the toes and swinging the body round on the heels. Remember that this is the only way to preserve your balance and keep the body from swaying about. Let the arms remain perfectly still by the sides, fingers pointing to the ground, and palms of the hands turned inwards, thumbs to the front. Keep your eyes off the ground, and look straight before you. On turning to the right, you will face a position at right angles to the present one, and you will have to perform two movements to execute this turn. You will on the word 'One,' draw back the right foot (the knee kept straight), place the hollow of the foot against the left heel, and remain steady. On the word 'Two,' swing the body round, balancing the weight on the heels, and remember not to fling your arms about. One! Two! Well done. Now, in turning to the front again, that is, to face me, as before, all you have to do is to reverse these movements thus:—On the word 'One,' place the heel of the right foot in the hollow of the left, and at

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the word 'Two,' swing the body round to the left until you face me. One! Two! That's it. Now you observe that although you move the right foot, the left foot has never moved from the spot it was originally placed on. Now you are facing me; to turn to the left you have only to repeat the last mode of turning, thus: On the word 'One,' place the right heel in the hollow of the left foot, and on the word 'Two,' swing round, when your feet will be in the position they now are, that is, thrown out from your body at an angle of 45 deg.

"To turn to the front again is to perform the movements executed in turning to the right. Now, it is obvious that if you turn to the right four successive times, you will be fronting us as at present—thus, on the first turn to the right, you will face your right; on the second turn you will reverse your present position; on the third turn you will be looking toward the left; and on the fourth turn you will be facing me again. Just so in turning round to the left, at each turn you make a quarter circle. But to reverse your present position—that is, to turn your back towards me, there is a much quicker way than making the half-turns. This turning is executed in three movements. Thus, on the caution word 'Right about turn,' you will remain steady until I give the word 'One,' then draw back the right foot, and place the ball of the toe against the left heel. On the word 'Two,' swing the body round through a half circle until you reverse your present position, and remain steady, until I give the word "three," then draw back the right foot and remain at attention. On the word of command, "front turn," make exactly similar movements and turn towards me, swinging round to your right. Now, throughout these movements you have done them fairly well, but you have been unsteady. I could not expect you to do them perfect at the first trial, but when by yourselves you can practise them, remembering that all the movements should be done methodically, and in regular time, until you can do them perfectly. Avoid flinging the arms about, or swaying from side to side, and be sure and remain steady after each movement until the word of command is given to do the next. Thus only will you gain perfect control over your movements.

"Much of the value of systematic training consists in this control of the will over involuntary movements, but by methodicity you become so habituated to the action, that you can perform it automatically.

"Thus, an old pensioned-off soldier was seen carrying his dinner away from the bakehouse. Some one smartly called out, 'Attention!' Down went the man's arms by his side, and he straightened himself up in a moment, unconsciously dropping the dinner he was carrying, so habituated had his mind become to obedience to commands.

"The use of the movements just gone through is to give you power over the balancing of the body and render each movement graceful in turning round. The most graceful skater is that one whose movements seem to be done without an effort, and thus by these 'turnings' you will be able to glide about without awkwardness."

Sore Nipples.—Dr. Favre is of opinion that there are two varieties of these, fissures and erosions, and believes that the latter are to a large extent due to tight-fitting dresses and pressure by corsets. He advises that the nipples be sprinkled with bismuth, dry, or that this be made into an ointment in the proportion of one of bismuth to two of vaseline. This procedure has often resulted in a cure within twenty-four hours.

Our Bookshelf

"Reading maketh a full man."—*Bacon.*

The Art of Washing. By A. A. Strange Butson, author of "On the Leads." (London: Griffith & Farran, St. Paul's Churchyard. Dutton & Co., New York. 1880.)

The saying, "Cleanliness is next to godliness," is so familiar to all, and so generally approved of, that we have known persons who believed it to be a quotation from the Bible. It is certainly worthy of notice that personal washing in olden times was closely associated with religious ceremonies. The rigid commands laid down to the Jews, included many in which the bathing of the body, or parts of the body, held a prominent place. In later times, in our country, the ceremony of bathing preceded the bestowal of knightly honour; while, to this day, in Mohammedan countries, no True Believer prostrates himself with his face towards Mecca without first washing his feet, his hands, and his head. These facts show that cleanliness of body has, in all ages, been connected with purity of mind; and, although we too often find lowness and meanness of soul in a perfectly well-cared-for body, there are few who would be willing to believe that a pure and lofty mind could be content to keep its "earthly tabernacle" in a squalid and filthy condition.

In the book before us, which is printed upon tinted paper, and altogether daintily got up, as a book on such a subject should be, we find the art of washing fully treated of under three heads; viz., 1. Personal washing; 2, clothes washing; 3, house washing. Of the three, the first is naturally the most practically interesting to the majority of people, as nearly all of us, who have arrived at the years of discretion, have the charge of our own bodies, and the power of keeping them in proper order. In the olden times, as the author tells us, the Romans were famed for the number and luxuriousness of their baths, both public and private. They rightly regarded the use of water, hot and cold, frequent and plentiful, as a means towards strengthening and beautifying their persons. In our day, we English pride ourselves on our love of soap and water; and those of us who have travelled on the Continent may have felt inclined to wish that the Romans had spread their knowledge of this art more widely. While endeavouring to perform our customary ablutions in the small *soup-plates* which are provided for the purpose] in many foreign hotels, the utility of foreign ideas of washing and cleanliness may be thoroughly estimated.

It is a well-known fact, but seldom realised and rarely remembered, that the skin is one of the greatest safety-valves of the "fearfully and wonderfully made" human machine; that the millions of little perspiratory tubes with which this most intricate and beautifully-organised covering is pierced, throw out from the inner system an average amount of thirty-three ounces of greasy refuse and worn-out material in an hour, in the form of invisible perspiration, and in the same time often as much as from two to three pounds in visible perspiration.* Perspiration there must be, or the health of the individual will suffer; therefore the great thing is to keep the skin machinery in efficient working order. Should the little tubes or pores be allowed to remain choked with their own secretions, the refuse matter is thrown back into the other great corporeal scavengers: the lungs, stomach, liver, or kindeys. To assist and ensure healthy action, woollen material, no matter how thin, should always be worn next the skin, and the same garment *never* retained at night.

* The author must mean daily instead of hourly. The skin gives off, under ordinary circumstances, from 1¼ to 2 lb. of watery vapour *per day*, whilst her estimate of the other refuse is certainly highly excessive.—Ed. H.

The author does not, in spite of the traditions of our nursery days, the horrors of which must be fresh in the minds of many of us, strongly advocate perfectly cold baths, either for children or grown people. The agony caused to many delicate children, through the ignorance of mothers and nurses, by making them stand in cold water, often in a cold room in the depth of winter (while frequently the process of bathing is anything but a brisk one), must in a good many cases make the daily bath, instead of being a pleasure and a luxury, a very trying ordeal to the shivering little victims. To none but the very strongest, is a perfectly cold bath in cold weather either pleasant or profitable. The water as a general rule should be of the same temperature as the body, so that no disagreeable shock is caused by plunging into the bath; while on no account (in the case of a daily bath) should it be so warm as to prevent an invigorating and refreshing sensation on emerging. To those who have the accommodation and the desire, the directions given for a bath in the "Art of Washing" are perfect, and tend to render the morning ablution an inexpensive and healthy luxury.

In the first place, you must be provided with a perfectly clean bath, a fresh, clean sponge, and one of those pretty fibres called *loufs* (erroneously named loophars), which are the inside seed-membranes of a large gourd, growing freely in warm countries, such as Italy and Egypt. I strongly recommend them as a clean substitute for the old conventional piece of flannel so intimately connected in our minds with the terrible "tub-nights" of our nursery days. . . . . Your soap may be what you like best, avoiding one unpleasantly scented. . . . . The choice of towels is also a matter of taste, and it is one in which experience and sensation must guide you, for skins are so differently sensitive, and very rough towels are no more advisable than the very smooth ones necessary only to quite young children; but it is well always to have a large towel or bath-sheet to throw over you in coming out of the bath. These, then, are your implements. Now fill your bath with warm (not *hot*) water. Soap your louf, and proceed to the soap-scrubbing course; and remember that it is not sufficient to smear yourself with a lather, but each crevice and cranny must be conscientiously "holy-stoned" with your louf. This being done . . . . pour into your bath a large canful of cold-water, and with a fresh clean sponge thoroughly and effectually rinse every vestige of soap from your person; then, like a dripping water-dog, jump out on a strong rough towel, previously spread on the bath-blanket that underlies your bath, and, throwing round you the large bath-towel, begin to dry yourself."

There are in this useful little book some valuable hints regarding the washing of infants, those "tender plants" who require such gentle and constant attention. Some very sensible remarks are made also on the care and cleansing of the teeth and hair, both of which, when well cared for, are such pleasant additions to personal beauty, and so disagreeable to look at when neglected. We have not space to go into the details of these observations, nor to quote the author's useful hints as to the manner in which our washing implements may be kept in perfect order; but for those whose houses are not fitted with bath accommodation we give the following extracts:—

No one need excuse himself from having a good wash on the plea of not possessing a bath, for this may at all times be accomplished after Miss Nightingale's plan, in the rules she laid down for the lady nurses who accompanied her to the Crimea. Even if they had but the poor accommodation of a small basin, they were to thoroughly sponge themselves from "top to toe" daily; and to the poorest of us this is possible. Added to this, few things are more refreshing and valuable to health, for those in attendance in the sick-room, than a daily bath, even after a night of sleepless watching; and whilst cleanliness can never be overdone in the person and surroundings of the sick-nurse, we have Mr. (now Sir) Erasmus Wilson's authority that "no harm can arise from too frequent ablutions; much evil may result from their neglect." A motto every individual should lay to heart . . . . . .

Many persons say, "I could not waste so much time about washing as you propose." Setting aside the pleasure and comfort of being clean, be assured that no time is wasted in securing an efficient and healthy state of our "earthly tabernacle."

And we might add that if any one has not time to perform the daily ablutions necessary to health and perfect cleanliness, it is because the time has been *wasted* in some other way; in most cases, we fear, in bed.

Through want of space we are obliged to comment very lightly on the second and third parts treated in the "Art of Washing," viz., clothes and houses. It is, however, needless to say that these are subjects quite as important as, and closely connected with, personal cleanliness. We should strongly advise all those who are interested in the everyday trifles—so-called—which conduce to a happy, healthy life, to study this interesting little book; and even those to whom the many hints are familiar will not feel that they have wasted time in recalling them to their remembrance.

At page 51 we notice a printer's error, where *unties* is substituted for *unites*.

The Parents' Medical Note-Book. Compiled by A. Dunbar Walker, M.D., C.M. (London: H. K. Lewis, Gower-street, W.C.) 1884.

This little book is intended to enable parents to keep a careful record of the diseases through which their children pass—a record which would be of the utmost value to medical men, "enabling them rightly to interpret symptoms which otherwise would be unintelligible." But it does more than this, enabling them to keep an account of the physiological, as well as pathological, status of their children, at any rate for the first two and a half years. We find columns in which to record the increasing weights of the child during each succeeding month, and we would suggest the insertion of a similar column in which to record the growth rate. There are also columns to record the quantity of food taken and the hours of sleep, and a whole table is devoted to the dentition crisis. Four columns are devoted to each disease, and these are headed —1, date; 2, age; 3, duration; 4, after effects; and on the page facing each table a short description of the disease and its usual sequence is given. We heartily recommend this note-book to the use of parents, as when properly filled up it will not only be of the greatest value to the individual whose early physical history it details, but, in accordance with the laws of heredity, when that individual in turn becomes a parent, it will be a useful guide to the solution of many questions affecting his or her children.

Sanitary Appliances, Etc.

DR. DUNBAR'S "ALKARAM."

This well-known preparation consists of a combination of substances enclosed in a tightly-stoppered bottle, and adapted for inhalation in cases of "coryza," nasal catarrh, or "cold in the head." Every one has experienced the disagreeable sensations proper to this latter affection, which is related to the familiar "hay-fever" itself. The "Alkaram" has a pleasant and pungent odour, and on the approach of the symptoms of cold only requires to be inhaled or sniffed so as to arrest the symptoms; while, even when the cold has become established, this preparation relieves the head-tension which constitutes such a marked feature of the affection. The action of "Alkaram" appears to be that of destroying, by inhalation of its vapour, the microscopic *bacilli* and other lower organisms which probably cause the disease, and which, being transmitted from a patient to healthy mucous membrane reproduce the symptoms of the cold. In this light, "Alkaram" is a medical agent of high value and of scientific kind. We may add that it is thoroughly safe to use in every respect.

SCOTT'S MIDLOTHIAN OAT-FLOUR.

Messrs. Scott, of 82, York-street, Glasgow, have prepared a singularly pure and nutritious "Oat-Flour," which bids fair to take high rank among the food products which are specially adapted for infants and invalids, and for the use of dyspeptics in particular, whose digestion is weak, and whose stomachs refuse to assimilate foods of ordinary kind. The Midlothian Oats have long been celebrated for their high quality, and the flour prepared therefrom is found on chemical analysis to contain nearly 13 per cent. of flesh-forming matter, in addition to nearly 9 per cent. of oil, and 65 per cent. of starch. The vegetable fibre has been removed, and the preparation is therefore of the purest kind, and contains nothing save highly nutrient substances. A variety of agreeable dishes can be prepared from this flour, and those who have grown weary of the ordinary "corn-flours" may with advantage give the "Midlothian Oat-Flour" a trial. There is no preparation which can be assimilated with greater facility than such a flour as this. Those who suffer from indigestion might substitute for their ordinary breakfast materials this flour, prepared according to the recipe given by Messrs. Scott and printed on the tins. For young children this flour may also form a convenient substitute for porridge, when that dish becomes distasteful.

Our Letter : Box

"Conference [maketh] a ready man."—*Bacon.*

NOTICES TO CORRESPONDENTS.

All Communications for the Editorial Department (including specimens of Sanitary Appliances, &c.), to be addressed to "The Editor of Health," 74-76, *Great Queen-street, London, W.C. Those intended for the Publishing Office to be sent to* "The Publisher," *at the same address.*

Correspondents are requested to write on one side of the paper only. The Editor *disclaims responsibility for the opinions expressed by Correspondents.*

LETTERS TO THE EDITOR.

CHILDREN'S DRESS.

Dear Sir,—I have noticed the correspondence which has passed in your journal between Mr. H. Maxwell and Miss Ada Ballin on the above subject, and it is to a remark made by Miss Ballin in No. 42, that I now wish to refer. She says she is "not at all favourably impressed with the appearance of those young ladies who have renounced the use of corsets. They all look limp, invertebrate creatures," and she "has not seen one without a confirmed stoop." I could point out to Miss Ballin many ladies of my acquaintance who have never worn stays, and who neither look limp nor stoop; in fact, I have been particularly struck with the erectness of their carriage. My mother, who is near sixty years of age, is *much straighter* in the back and shoulders than most of the *young* ladies whom I know. She never leans back in a chair, and does not appear to need *any* artificial support whatever. She has never worn stays for an hour. My opinion is that when a person commences to wear stays she is far more inclined to stoop than before, and as to the figure, the one without stays is far more graceful and pleasing to the eye than the hard, bony-looking structure we so often meet. I am very glad the outcry against this article of dress is becoming so decided, and I hope much good will be the result. To put children and growing girls into stays is simply outrageous. All the young muscles, so delicate and beautiful, should have full play to develop healthily as Nature intends them, and not be crushed and confined as they must be even by the most innocent description of stays. The more room these growing muscles have, the less deformity there will be, for Nature in her healthy development never deforms. Let us allow natural growth, and we shall have healthy and vigorous bodies.—I am, yours faithfully, M. Casson Grundy.

Manchester, *February* 9, 1884.

Liverpool, *Feb.* 1, 1884.

Dear Sir,—I am quite satisfied with the reply of your contributor, Ada S. Ballin, to my letter of December 31. It shows how difficult it is to eradicate from the mind ideas acquired in early life.

In this case your contributor has evidently been taught at one time that Nature has not done everything for us, and that to complete her handiwork in a proper manner, among other things a boot-maker is necessary, one who can make boots to fit a two-year old foot in the manner she describes, or else "deformity by spreading" is inevitable. It just occurs to me that the deformity alluded to is merely the shape of a properly developed foot, a thing which your contributor and many others have probably never seen.

I have read the opinions of many writers on this subject, and all advocate the use of boots sufficiently large to allow the feet to spread, and caution everyone against the use of those which in any way cramp the foot, or prevent its proper "play" while walking.

I will say nothing more on this subject, but I should like to see an expression of opinion from some one of experience respecting "deformity of the feet by spreading."—Yours faithfully,

H. Maxwell.

WATER-PIPES AND HEALTH.

Sir,—In the article on the above subject in Health, mention is made of the difficulty of finding a proper substitute for the dangerous lead water-pipe, and that, if the Bower-Barff process can be made a practical success so that a perfect coating of the black oxide of iron can be guaranteed in the interior of small size iron pipes, we shall have in it the ideal pipe for such purposes. I have just read a paper on the preservation of iron in the minutes of the proceedings of the Institution of Civil Engineers by Mr. B. Thwaites, C.E., from which it appears that the Bower-Barff process is now practically perfect, and the best means of preserving sanitary ironwork. It states that it is necessary the water-pipes, if of wrought-iron, should be fitted before being treated by the process. Apologising for trespassing on your valuable space, I remain yours truly, C. E.

QUERIES AND ANSWERS.

We would direct the attention of our correspondents to the fact that, owing to the necessity for sending Health to press early in the week, answers to queries cannot, as a rule, appear in the succeeding number of the journal. Every effort is made to secure punctuality in the replies, but we must ask the occasional indulgence of our readers, owing to the large amount of correspondence, which requires assortment and reply.

We must also request correspondents who write enclosing stamps for copies of Health, to address their inquiries to the Publisher, *and not to the Editor.*

We beg to announce to our correspondents that, save in exceptional cases, or where addresses of medical men, &c., are desired, we cannot reply to inquiries by letter.

GENERAL.

D. Gibson.—If you require copies of Health, write to the publishers, and enclose stamps.

Oxon.—We have never heard of the process to which you allude.

B. George.—Ammonia in small quantities is exhaled in health from lungs, skin, and kidneys.

Austin B.—See Dr. Carpenter's "Mental Physiology."

Bessie R.—There need be no hesitation in trying the remedy, but we do not think it likely to be successful in your case.

A Working Man.—The following works will suit you:—Wilson's "Healthy Houses" (5s.), and his "Handbook of Hygiene and Sanitary Science" (10s. 6d.), (both published by Churchill); Weatherley's "Ambulance Lectures" (Griffith & Farran); "First Aid to the Injured" (Smith, Elder, & Co.).

SANITARY.

Interested.—In some moorland districts water may contain from twelve to thirty grains of vegetable matter. Imparting a brownish tint.

Ongar.—See our articles on "Cottage Hospitals," by Dr. Gibson.

A. C.—There is a syphon trap recommended in the model by-laws of the Local Government Board. Various ventilating traps have already been described in Health. Amongst these, Buchan's, Banner's, and the Edinburgh air chamber trap may be mentioned as being highly satisfactory.

MEDICAL.

Bromptonian.—For ring-worm we should recommend you firstly to attend to your general health, and to take cod-liver oil and iron thrice daily. Try painting with acetic acid as an application to the spots.

Antonio.—What you mention is perfectly natural, and rather a

sign of health than otherwise. You might try Rowlands' Macassar Oil for the hair. A little of this goes a long way, and it is a pure preparation.

S. E. R.—Your deafness must be remedied by an aural surgeon, although the tonic recommended to "Ajax" in No. 44 HEALTH, should be tried by you as a general restorative medicine. 2. The pupils of the eyes are naturally large in some persons. 3. Attend strictly to cleanliness, wash night and morning, and bathe with water in which a little Condy's Fluid has been placed.

R. R.—We know nothing of the practice of the two persons you mention, but both advertise, we believe, and certainly the charge you name seems excessive. You have learnt the lesson experienced by a good many persons that medical men who advertise are in no sense superior, but often inferior, in knowledge and ability to ordinary practitioners. If you are ever in want again of a reliable opinion we will be glad to send you the address of a trustworthy physician.

BERRY.—1. We have no faith in the preparation you allude to. 2. Try the effect of the tonic recommended to "Ajax" in No. 44 of HEALTH. 3. The system is a good one, we believe, but you yourself must judge of its excellence.

KATHRINE.—Your symptoms are those of indigestion. We should advise you to give up tea entirely and try a little milk instead. See also to your general health.

AGONIZED.—See advice given to "A Sufferer," in present number of HEALTH, and attend specially to instructions regarding the employment of fomentations to the painful joints.

F. R. J. M.—You entirely mistake the opinion to which you allude. Because albino children have been known in one case to follow the marriage of first cousins, there is no logic or reason in the idea that the children of such marriages must invariably be so. If first cousins are perfectly healthy, there is no reason why marriage in such a case should not be undertaken.

DIABETES.—No articles have appeared. The disease is a highly insidious one, requiring careful medical watching; and is likewise too technical in its nature for you to understand it. The treatment you mention is that usually adopted. You might write to Mr. Van Abbott, of Princes-street, London, W., for his catalogue of foods specially prepared for diabetic patients.

C. E. L.—We should recommend you to give up all extra work, to rest as much as possible, to take a change of air, if it can be managed, and to try for a time the tonic recommended to "Ajax" in No. 44 of HEALTH.

GEN-EL-WORE.—Your sheet anchor of hope is strict attention to your general health. Avoid all excitement. Rest as much as possible, and take moderate open-air exercise. Yours is not a case for drugs, unless any of your former symptoms should supervene.

W. H.—See advice to "Gen-el-wore" above. If at all low in health, the tonic recommended to "Ajax" in No. 44 of HEALTH might be tried; but yours is evidently a case in which your general health requires looking to. The quack pamphlet you enclose is a fair sample of its kind.

A. Z.—1. Depends entirely on choice; we should say neither over high nor too low. 2. Dumb-bells should be used, for preference, in the morning, not at night. 3. We entirely agree with you that a perfectly natural and upright carriage can be maintained without the aid of stays.

HOPEFUL.—1. No cause to be alarmed whatever. But do not drink too much tea. Consult, for your eyes, the surgeon in charge of the eye department of your nearest hospital or infirmary.

GEORGE BALCOMBE.—Chocolate cake, if thoroughly pure, is not in the least degree injurious to young children; but we should not allow a child of the age you mention to have a large supply of the sweetmeat named, or of any other sweetmeats.

LINCOLN'S INN-FIELDS.—There is no doubt that if the silk be sufficiently thick it is quite as effective protection as wool, always provided that you wear a sufficiently heavy under-shirt above the under-garment. We are believers in the practice of making the garment which is next the skin somewhat light, but absorbent, and of wearing a thick flannel above this.

VECTIS.—It is possible that you are merely suffering from some local irritation of the ear. We should strongly advise you to have your ears thoroughly examined by a competent aural surgeon. We remember a case somewhat similar to yours being caused by a collection of wax in the ear. Frequently some irritation of the nerve of hearing is produced by similar conditions, and an examination such as we suggest may relieve all your symptoms.

BYRON.—The tonic you name is the best we possess. It contains phosphorus in a form readily assimilated; it also contains iron and other drugs.

A READER (will please use some more distinctive name in future). We think that the illness from which you have suffered has left you in a highly-nervous state. The best remedy we can prescribe is that of a complete change to the seaside. Look well to your digestion, and for a time let your food be light and consist chiefly of milk and strong soups. Yours is not a case for drugs.

H. T. W.—The pains you complain of are liable to shift about, and may certainly arise from indigestion. We should recommend you, as a piece of preliminary advice, to rest after food, and to take a little of Morson's "Pepsine" with your food.

CAMBRIA.—It is just possible that smoking late at night may account for some of your symptoms, but we should advise you to give up all aperient medicines, and let your food be light and nourishing, and to include plenty of vegetables and fruits. See also that you rest after taking food. If for a time you will be content to live on extremely simple fare, chiefly soups, you will effect a cure.

MUSCULAR CONTRACTION.—It is quite evident that you have been doing far too much, both in the way of work and recreation, and are hence suffering from the effects of over exertion. We should strongly recommend you to rest as much as possible, to take warm baths once or twice a week, and to try the tonic recommended to "Ajax" in No. 44 of HEALTH. There is no doubt that rest, and possibly a change of air, are the main points in your treatment.

F. WENLOCK.—Before we can tell whether football is injurious or not, in your case we would require to know something of your physical constitution. Speaking generally, we should not recommend any one in your position to indulge suddenly once a week in any active exertion. You will find that a daily walk will be much more serviceable to you than a weekly game of football, with all its attendant risks of strain.

AMATEUR ATHLETE.—You evidently suffer from chronic cold, for which we should advise you to take during the winter a dessertspoonful of cod-liver oil after meals as a strengthening remedy. When the cold is annoying, you might try an inhalation for five minutes at a time of the following:—Oil of pine, 2 drachms; heavy carbonate of magnesia, 1 drachm; water to make up 3 oz. A teaspoonful to be placed in a pint of water at 150 degrees F. for each inhalation.

JUVENIS.—We have given you a recommendation to try "Pepsine," and it is in your own option to follow our advice or not. The price you mention as charged for the "Pepsine" is excessive. It is much cheaper. Try Morson's preparation.

C. T.—We do not know of any home which would suit you, but as you certainly cannot go to the country or seaside until you are thoroughly cured of the fever, we should recommend you to select any bracing seaside place, and simply to take apartments there, or to visit any of the hydropathic establishments which are now so numerous at various health resorts. Bourne Hall, Bournemouth, is a good "Home" for such cases as yours, if the tariff is within your means.

JACQUES.—1. Enlargement of the tonsils may be due to various causes, and often unconnected with constitutional peculiarities. We should strongly recommend you to give the child cod-liver oil, to which syrup of iodide of iron has been added. If the glands continue troublesome we should recommend you to have them removed. 2. In the other matter to which you allude, we should recommend you to give the tonic prescribed to "Ajax," in No. 44 of HEALTH a trial. The debility probably arises from simple want of tone.

CONDUCTOR.—We should recommend you to practise cold sponging each morning. The tonic you are at present taking is the best you could use. You must not be morbid, and by the aid of cheerfulness you will in time get quite well. Yours is a sample of the cases on which quacks flourish.

JAMES.—Firstly, moderate dumb-bell and trapeze exercise will increase chest width. Secondly, no tooth-wash is effective for keeping the teeth clean. You require a tooth-powder. Use camphorated chalk.

NERVOUS JACK.—What you complain of is not uncommon. But you entirely mistake the nature of the secretion to which you allude. You should take a simple tonic, and probably the use of cold sponging will be found to remove your complaint. 2. If you will let us know in what quarter you desire to find the gymnasium about which you inquire, we shall endeavour to give you a satisfactory reply.

CITIZEN.—We have no confidence in the preparation you name. You probably suffer from the sudden exertion. But as there has been no return of the bleeding, we should simply advise you to guard carefully against cold, and if the cough should return, to consult a physician. You might meanwhile try the effect of the tonic recommended to "Ajax" in HEALTH, No. 44. A course of cod-liver oil would also do you good. A desertspoonful thrice daily after meals.

WALTER HOWARD.—We think yours is a case in which you should consult with a surgeon, as he alone will be able definitely to ascertain the exact nature of the swelling of which you complain. Follow this advice, and state fully your symptoms to the surgeon.

A. E. or A Reader.—[You should choose one cognomen, not two.] See advice to a "City Clerk" in Health, No. 43. You must not take cod-liver oil at night. Don't be alarmed, as, by attention to our advice indicated, you will get quite well.

Shandon.—Yours is a case in which you should undergo a thorough examination by a physician. There are indications in your statement that such a course is advisable, and your mind will be relieved thereby.

Harry.—Do not be nervous; you are somewhat excited over your troubles, which, after all, only require strict attention to the general health that they may be overcome. You might try a change of air, if possible, and the advice given to "Countryman," in Health, No. 44, applies to your case; and the treatment therein indicated should be persevered in thoroughly. Write again, if not better.

Paul Jones.—Try the effect of applying a little "Vaseline" before and after shaving. What you complain of is natural to some complexions.

Scotia.—We cannot see any good we can do you, when by your own confession you are so nervous that you have even a distrust of medicines which may be prescribed for you. We are of opinion that your troubles are chiefly mental, and, in all probability, increased by the indigestion of which you complain. You might try the effect of taking a little "Pepsine" daily with your food.

Compositor.—You do not say what you take for dinner, and we cannot, therefore, pronounce any opinion upon the merits of your dietary. Three meals a day are necessary for you, but the interval between your dinner and tea is certainly too long.

Alga.—We think in your case that a dietary in which vegetable and fruit form prominent items would tend to cure the constipation of which you complain. You might likewise try a little "Pepsine," and for the pimples the following powders:—Sulphide of lime, 24 grains; sugar of milk, half an ounce; mix and keep in a stoppered bottle. Take as much of this powder as will lie on a sixpence every four hours.

Canton.—In a healthy person what you name may occur once weekly without injury, or even more frequently, according to constitution, for much depends upon the individual peculiarity. In your case the violent exercise in which you indulge probably affects you through your nervous system, indicating thereby its unfitness, and advisability of your indulging in some less violent form of recreation. You might try the effect of "Kreochyle Liquid Food."

L. C. O.—We think with advantage you might try the mixture recommended to "A Foreigner," in No. 44 Health as a corrective to the indigestion from which you suffer. Let us hear the effect of this advice.

Uddingston.—So far as we see, you have no need to be nervous. We should recommend you, if your work is below ground, as we suppose, to endeavour to obtain a change of employment. See likewise to your digestion, for, as your medical men have informed you, the symptoms of which you complain more frequently arise from the stomach than the heart. See that your food is light but nutritious, and take a little "Pepsine" with your meals.

W. S.—We should recommend you to give the patient 15 grains bromide of potass, each alternate night, in a wineglassful of water, on going to bed. In such cases it is sometimes advisable that a little light supper be taken about an hour and a half before retiring to rest. Sleeplessness in old persons is often caused by fasting before retiring to rest.

Draughtsman.—What you mention regarding your own and the other case is extremely curious, but not altogether unknown in the history of skin diseases. Change of diet, in conjunction with individual peculiarity of constitution, often produces such results in certain cases. No one law can be laid down for all cases. We imagine that a diet of which vegetables and fruit form a marked proportion might suit you; and such a food experiment is certainly worth trying in your case. It is possible that milk may not agree with you, and hence, as the result of experience, it is well to avoid that fluid. If you wish to try a form of treatment much in repute, you might use an ointment consisting of one drachm of chrysophanic acid added to two ounces of lard. A small part of this should be rubbed into the spots daily. It will stain the skin and linen and must be used carefully. Another method of cure is by keeping patients in a tepid bath of 90 deg. Fahr. five hours a day for six weeks. A tedious process, but one apparently very successful.

Amy.—What you mention is possible. We cannot say more.

J. D.—The treatment we should recommend you is simply to pay strict attention to cleanliness, and to apply a little pure Vaseline continually to the parts. You do not suffer from any disease.

Charles Johnstone.—You should try the effect of making vegetables a part of your food, fruits, such as apples, and try stewed fruits as well. A tumbler of cold water taken first thing in the morning on rising may also do good. Beware of getting into the habit of taking aperients.

E. V. L.—In the treatment to which you refer milk and eggs form prominent parts of the diet, and not the sole articles consumed; for example, the patients, except under certain circumstances, would dine on ordinary fare. If you wish for further information, address the physician himself.

Lina.—If you will consult the advertising columns of the *Lancet* or *British Medical Journal* you will find advertised therein homes and establishments of the kind to which you refer. You will be able from the list there found to select that best suited to your requirements.

Expectancy.—You are quite well. You should know that what you complain of is really a sign of good health. So long as your condition remains as at present, you have every reason to rejoice in the possession of health. Only quacks would persuade you differently. Use cold sponging each morning, and take more open-air exercise.

Hopeful.—We are not sure that we understand you. Where does the fluid collect? There should, in health, be no such symptom, and you must be more explicit in your description of your case. If there is any swelling or enlargement, you must see a surgeon.

Wandering J.—We fancy you would find the services of a hairdresser or some one of similar occupation suitable. An advertisement in one of the daily papers, stating you require slight services of the kind occasionally, would be your best plan.

Claudius.—Take plenty of exercise, sufficient to weary you out; live moderately; avoid fluids late at night; sleep on a hard mattress, and, above all, exercise mental control. No medicines are required, only common-sense and open-air exercise.

An Anxious Mother.—You evidently did not state the case fully in your first letter, as your second contains details we have not heard of before. Please restate the case fully in all its details, and we will endeavour to give you an opinion. When did the examination (of which you did not speak before) take place, and why?

Eye.—In such a case as yours we are of opinion that you require constitutional rather than local treatment. We should advise you to see a physician who will prescribe for you. Glad (if desired) to send you the address of an Edinburgh physician who will satisfy your requirements. Don't trifle with your eyes.

A Sufferer.—Lemon-juice will do you no harm. Your safety is to guard against cold and chill, to wear plenty of flannel, and to lie between blankets. You should drink potass-water when the symptoms appear. For the rest, strict attention to digestion and to the general health at large are the main points. When the joints are painful you should soak flannels in a mixture of half-an-ounce of carbonate of soda and six drachms of liquor of opium added to nine ounces of hot water. The flannels are then to be applied to the joints and gutta-percha placed over all, so as to make a kind of local vapour-bath for the painful parts.

J. B. L.—Try "Alkaram," which (like the mixture you have been using) is a safe remedy. You might also sniff the vapour of sulphur*ous* (not sulphur*ic*) acid, kept in a stoppered bottle. But in cases like yours we have invariably seen great benefit derived from a change to the seaside for a time, and by taking a little cod-liver oil emulsion.

D. S. W.—See advice to "J. B. L." above. Yours is a case in which a sea change would be beneficial. The symptoms you suffer from are merely indicative of a low state of health. Try the tonic recommended to "Ajax" in No. 44 Health.

J. W. S.—A symptom possibly of a little lowness of the system and feeble circulation. Try the effect of a little cod-liver oil cream (to be had from Mr. Thomson, chemist, Dublin-street, Edinburgh) taken through the cold weather. If your general health is braced up, your annoyance will probably cease.

Scotsman.—Rest after food, above all things else. Try a charcoal biscuit or two and the following powder:—Subnitrate of bismuth, five grains; compound tragacanth powder, half a scruple; one such powder to be taken twice daily for a short time.

J. A. R.—We should recommend you first to see a good physician or surgeon, and to follow his advice implicitly. In such a case as yours, we should fancy dilatation might be tried; but if this does not suffice, the operation to which you allude is a simple one, and performed daily. Don't think as you do of hospitals. We shall be glad (if you care for it) to put you in the way of obtaining an opinion. The methods to which you allude, as advertised, are quackery or related thereto.

Judex.—Use injections of "Condy's Fluid" and water (1 part to 10 or 15); avoid constipation and all stimulants; attend to cleanliness; and, above all, rest for a week or more.

Homo.—The person whose pamphlet you send us, lives and trades on the fears of the ignorant and youthful. See advice to "Claudius" above. Seek cheerful company, and don't grow morbid.

[*Continued on page* 320.

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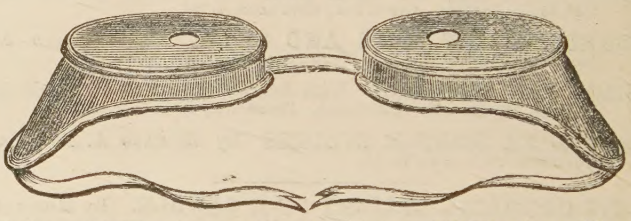

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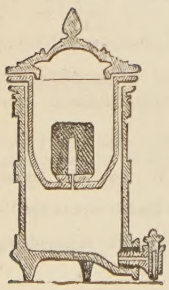

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